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| Title | MINING FOR PEANUTS |
| Level | Primary/Middle/High School |
| Subject | Earth Science / Environmental Science |
| Duration | 2-3 Periods |
| Objective | Students will be able to identify the different ways of extracting coal from the ground by learning the three types of mining. The students will perform a simulated strip mining operation including reclamation. |
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➤ ACTIVITY

✓ **Purpose:**

Students will simulate a strip mining operation by completing a hands-on cooperative learning activity.

✓ **Materials:**

Shoebox or equivalent, soil, gravel, sand, grass clippings, plastic forks, plastic spoons, dissecting probes, spaghetti spoons, peanuts- in their shells

✓ **Procedure:**

1. Place students into groups of 3 – 4 students. Each group will receive a shoebox, a designated amount of peanuts (15), and a probe. They may have access to the sand, soil, grass clippings and gravel as needed. Each group will create a “strip mining site” by hiding the peanuts in a shoebox and covering them with the varying earth materials provided.

| Example: Correct layers of the shoebox. |
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| Grass Clippings - <i>top</i> |
| Soil |
| Sand |
| Gravel |
| Peanuts - <i>bottom</i> |

2. The students may be required to diagram a map of the mining site they created and/or the site they are mining. The students will begin mining with the most difficult piece of equipment – the probe. As they obtain peanuts they may “purchase” better equipment. Next in line would be the plastic fork which they may purchase for 2 peanuts.
(You may vary the price list, the equipment and the amount of peanuts based on class size and money/supplies available.)

| Example: Price List | |
|----------------------------|-----------|
| Plastic fork | 2 peanuts |
| Plastic spoon | 3 peanuts |
| Spaghetti straining spoon | 6 peanuts |

3. Once the area has been “mined out” it is time for the reclamation process. It is the mining companies’ job to put the land back the way it was before mining. Each group will now try to “reclaim” their mining site.
(This shows students not only how costly and difficult this task really is, but also demonstrates why so many mining companies went out of business trying to accomplish reclamation.)